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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,924	11/21/2003	Marc M. Baum	51472/DRK/P758	3349
23363	7590	02/14/2006	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			KURTZ, BENJAMIN M	
PO BOX 7068			ART UNIT	
PASADENA, CA 91109-7068			PAPER NUMBER	

1723

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/719,924	Applicant(s) BAUM ET AL.	
	Examiner Benjamin Kurtz	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/30/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. [1] as follows: The Oath/Declaration does not contain a reference to the provisional application 60/428,653 from which priority is claimed.

Claim Objections

2. Claim 14 is objected to because of the following informalities: claim 14 is dependent on itself. Appropriate correction is required. For examination purposes claim 14 is taken to be dependent on claim 1.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 15 and 48 recite the limitation "wastewater". There is insufficient antecedent basis for this limitation in the claim; each independent claim only sites the limitation of water. For examination purposes wastewater is treated as water.
4. Claim 50 recites the limitation "stormwater" and "H₂O₂". There is insufficient antecedent basis for this limitation in the claim the independent claim only sites the limitation of water and a peroxide and not necessarily hydrogen peroxide. For examination purposes stormwater is assumed to be water, and H₂O₂ is assumed to be peroxide.

5. Claim 29 recites the limitation "the automated chemical disinfection system". There is insufficient antecedent basis for this limitation in the claim. For examination purposes claim 29 is taken as being dependent on claim 25 and not 22.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-13, 22-34, 41-47 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Leary et al. Patent No. 4,659,459. Regarding claims 1-7, 25-29 and 42, O'Leary (459) discloses a water disinfection system (20) (fig. 1, col. 6, lines 29-34) comprising: a disinfection chemical dispenser (A, B, C) (fig. 1, col. 7, line 65 – col. 8 line 11), a mixing chamber (90) (fig. 1, col. 7, lines 62-64), and a control unit (64, 50, 62) (fig. 1, col. 6, lines 29-42). A sensor (118) that measures the water characteristics is located in the mixing chamber (90) (fig. 1, col. 8, lines 15-19), another sensor (94) is located upstream of the dispenser (A, B, C) (fig. 1, col. 7, lines 22-23), and another sensor (134) is located downstream of the mixing chamber (90) (fig. 1, col. 8, lines 31-34). The control unit (64, 50, 62) incorporates a feedback protocol that incorporates an array of physical and chemical parameters for disinfecting the water (fig. 1, col. 6, lines 29-42). It is inherent that the disclosed system comprises a power source for the controller, computer, electric valves, etc.

Regarding claims 8-10, 30-31 and 43-44, O'Leary (459) discloses a communication unit that permits communication between the system (20) and a distant management station through a wired communication unit (modem) where the communication unit provides remote control of the system (20) (col. 6, lines 51-57).

Regarding claims 11-12, 32-33 and 45-46, O'Leary (459) discloses the system (20) comprises a flow meter (88) and a Ph sensor (94) (fig. 1, col. 7, lines 22-31).

Regarding claims 13, 34 and 47, O'Leary (459) discloses the dispensers (A, B, C) comprise: a chemical storage container (110, 112, 114), a valve (104, 106, 108), a probe (98, 100, 102) that injects the chemical in to the chamber (90), and gravity feed (col. 6, lines 29-34), which performs the identical function of moving the chemical from the tank (110, 112, 114) to the chamber (90) in substantially the same way with substantially the same results as the pressure in the tank described herein.

Regarding claim 22-24 and 41 O'Leary (459) discloses a bypass system comprising a baffle (76) that controls flow of water through the system (20) (fig. 1, col. 6, lines 63-67), the mixing chamber (90) has static mixing parts to ensure thorough mixing (col. 10, lines 62-68), and a filtering system (52) that captures sediments prior to the treatment with chemical (fig. 1, col. 8, lines 44-47)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Leary (459) in view of Applegate et al. Patent No. 4,280,913. O'Leary (459) discloses a water disinfection system with a control system that can be used in any water treatment or conditioning system (col. 3, lines 18-21) but does not disclose that system being used at a storm drain collection location. Applegate (913) teaches a water purification process that is located in-line at a storm drain (col. 3, line 65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system as taught by O'Leary (459) in the place of the process as taught by Applegate (913). O'Leary discloses the system can be used in any water treatment system to purify a stream of water so it would have been obvious to use that system to purify the storm water flow as taught by Applegate (913).

8. Claims 15, 17-18, 35, 37-38, 48 and 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Leary (459) in view of Koubek Patent No. 4,012,321. O'Leary (459) discloses the system (20) but does not disclose what chemicals are stored in the tanks (110, 112, 114) or a UV source. Koubek (321) teaches a water disinfection method including using a disinfecting peroxide solution and a UV radiation source (28) illuminating the mixture stream downstream of the mixing chamber (23) (fig. 1, col. 5, lines 29-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of O'Leary (459) with the teachings of Koubek (321). The irradiation and OH kill all of the bacteria, virus, and germs carried by the waste stream (col. 5, lines 38-40).

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9. Claims 14, 16, 36 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Leary (459) in view of Iverson et al. Patent Pub. No. 2002/0014463. O'Leary (459) discloses the claimed invention but does not disclose the chemical dispenser storing precursor chemicals or the disinfecting chemical being chlorine dioxide. Iverson (463) teaches a method for cleaning a water distribution system comprising: chemical storage containers (26, 28) storing precursor chemicals (paragraph [0012]), and the disinfecting chemical is chlorine dioxide (paragraph [0002]) generated in the system prior to use. It would have been obvious to modify the system as taught by O'Leary (459) with the teachings of Iverson (463). Mixing the two precursors together inhibits and/or removes bacterial fouling and/or eliminates microorganisms (paragraph [0002]).

10. Claims 19-20, 39-40, and 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Leary (459) in view of Koubek (321) and further in view of Cox Patent No. 5,700,377. O'Leary (459) in view of Koubek (321) disclose the claimed system utilizing a chemical additive to disinfect a water stream with a UV radiation source downstream of the mixing of the chemical and the water but does not teach that the disinfecting chemical comprises a solution of a persulfate salt. Cox (377) teaches a chemical composition containing a persulfate salt and ammonium chloride for the treatment of water (col. 3, lines 20-24). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the persulfate as taught by Cox (377). The potassium persulfate and the ammonium chloride are

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effective in disinfecting water to be purified and in eradicating algae and bacteria (col. 5, lines 43-46).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Kurtz whose telephone number is 571-272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

bk


JOHN KIM
Primary PATENT EXAMINER